A workstation is a workstation is a workstation.

Finally, a workstation that goes beyond MIPS, MFLOPS, and megabytes and gets down to helping people work together better. A workstation that not only stands out, but also fits in. With your organization. Your existing equipment. And your people.

Everyone loves a winner.

In the beginning, it was our SPARCstation™ 1. It broke all records for price and performance. And became the best-selling desktop workstation in history.

Maybe it was our focused computing approach that won people over. All our workstations and servers are powered by the SPARC® microprocessor. All running the UNIX® operating system. All accessible by the OPEN LOOK® graphical user interface. And all linked together in the ONC™ networking environment.

A SPARCstation attracts crowds.

More SPARCstation systems have been sold than all other RISC UNIX workstations combined. That's one reason why developers worldwide write applications for the SPARCstation first. For you, this means more applications—sooner.

In fact, there are more than 3300 SPARCware™ solutions—and the number increases daily—including the most popular PC software, such as Lotus® 1-2-3,® dBASE IV, WordPerfect,® and Wingz.

With one notable exception.

And if you want to move from one SPARC system to another, your software moves with you. Easily.

Because a SPARCstation is based on open systems and industry standards, you'll never be left behind as innovative technologies emerge. We license our technologies to computer manufacturers worldwide, so the pace of innovation for our workstation is faster than what others can offer.

It gets along with everyone.

A SPARCstation is built to network. From the beginning. No add-ons. No afterthoughts.

So you can connect your SPARCstation into any network—whether it's Novell, IBM, or DEC—no matter where it is. And share information, printers, storage, and more with anyone, any time.

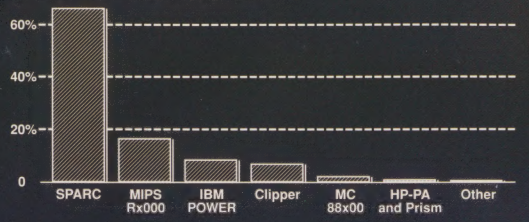
And on the subject of cost, let's just say that your engineers won't be the only ones smiling. So will your accountants.

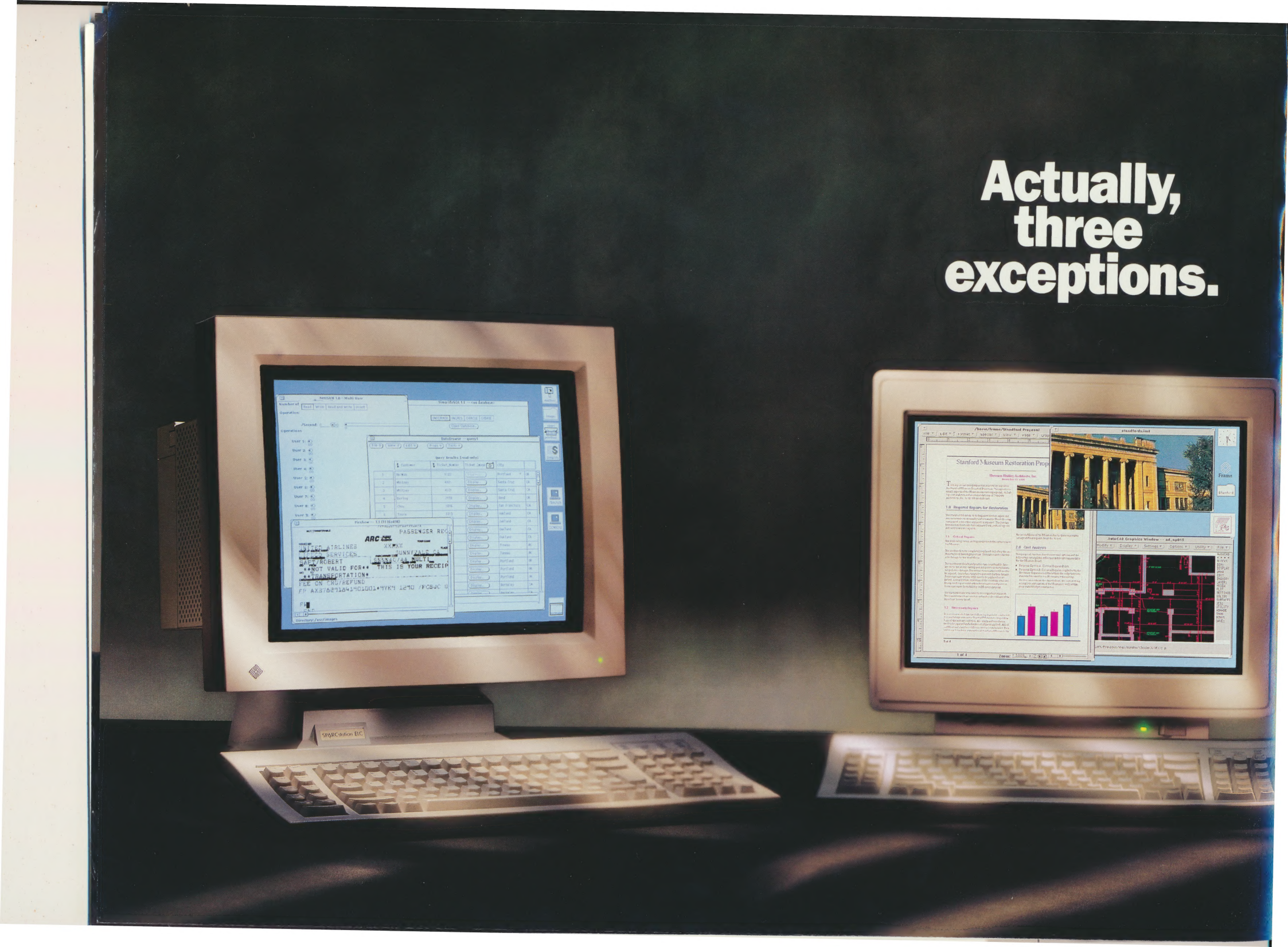
It's got our competitive spirit.

Everything that goes into a SPARCstation is what sets it apart from other workstations. And not just the technology, but the people who make it, too. You could say it's our engineers that make the SPARCstation a notable exception. After all, they build the workstation that allows groups and departments to work together concurrently, ultimately saving you time and money.

Having a proven winner, they could rest on their laurels. But our engineers haven't rested in nine years.

Worldwide RISC Workstation Market Share 1989-1990
Source: International Data Corporation, 1991




Actually,
three
exceptions.
Stanford Museum Restoration Prop
PASSENGER REC
ARC
SPARCstation ELC

SPARCstation ELC

Our lowest-priced workstation. The SPARCstation ELC's innovative packaging neatly fits an entire system board into a 17-inch high-resolution, convection-cooled monochrome monitor, leaving plenty of room on your desk.

SPARCstation IPX

Our lowest-priced accelerated color workstation. The SPARCstation IPX combines power, performance, expandability, and networking. All the features users need, at a PC price. And its compact design—with a 9.5-inch by 10.25-inch footprint—features two to four times faster performance than 80386-based PCs. For those who need the color but not the accelerated graphics of the SPARCstation IPX, the SPARCstation IPC is also available.

SPARCstation 2

Our high-performance, most expandable desktop workstation. With graphics acceleration, this power-user system delivers superior graphics and windowing performance.

	SPECmarks	MIPS	MFLOPS	Memory	Internal disk capacity	External disk capacity
SPARCstation ELC	17.1	21	3	8 MB standard, expandable to 64 MB	N/A	Up to 5.2 GB
SPARCstation IPC	11.8	17.4	2.1	8 MB standard, expandable to 48 MB	207 MB	Up to 15.6 GB
SPARCstation IPX	20.6	28.5	4.2	16 MB standard, expandable to 64 MB	207 MB	Up to 15.6 GB
SPARCstation 2	21.2	28.5	4.2	32 MB standard, expandable to 128 MB	Up to 848 MB	Up to 20.8 GB

Data interchange	Bus expansion	Ports	Display/graphics	Bundled software
CD-ROM	N/A	Two RS-232C, audio input and output, internal speaker, SCSI, Ethernet	Monochrome (antiglare treatment)	SunOS™, ONC/NFS®, OpenWindows™
3.5-inch PC-compatible floppy disk, CD-ROM	Two SBus slots	Two RS-423, audio input and output, internal speaker, SCSI, Ethernet	Color	SunOS, ONC/NFS, OpenWindows
3.5-inch PC-compatible floppy disk, CD-ROM	Two SBus slots	Two RS-423, audio input and output, internal speaker, SCSI, Ethernet	Accelerated color standard (2-D and 3-D wireframe), grayscale	SunOS, ONC/NFS, OpenWindows
3.5-inch PC-compatible floppy disk, CD-ROM	Three SBus slots	Two RS-423, audio input and output, internal speaker, SCSI, Ethernet	Accelerated color standard (2-D and 3-D wireframe), accelerated 3-D solids, monochrome	SunOS, ONC/NFS, OpenWindows

SPARCstation ELC

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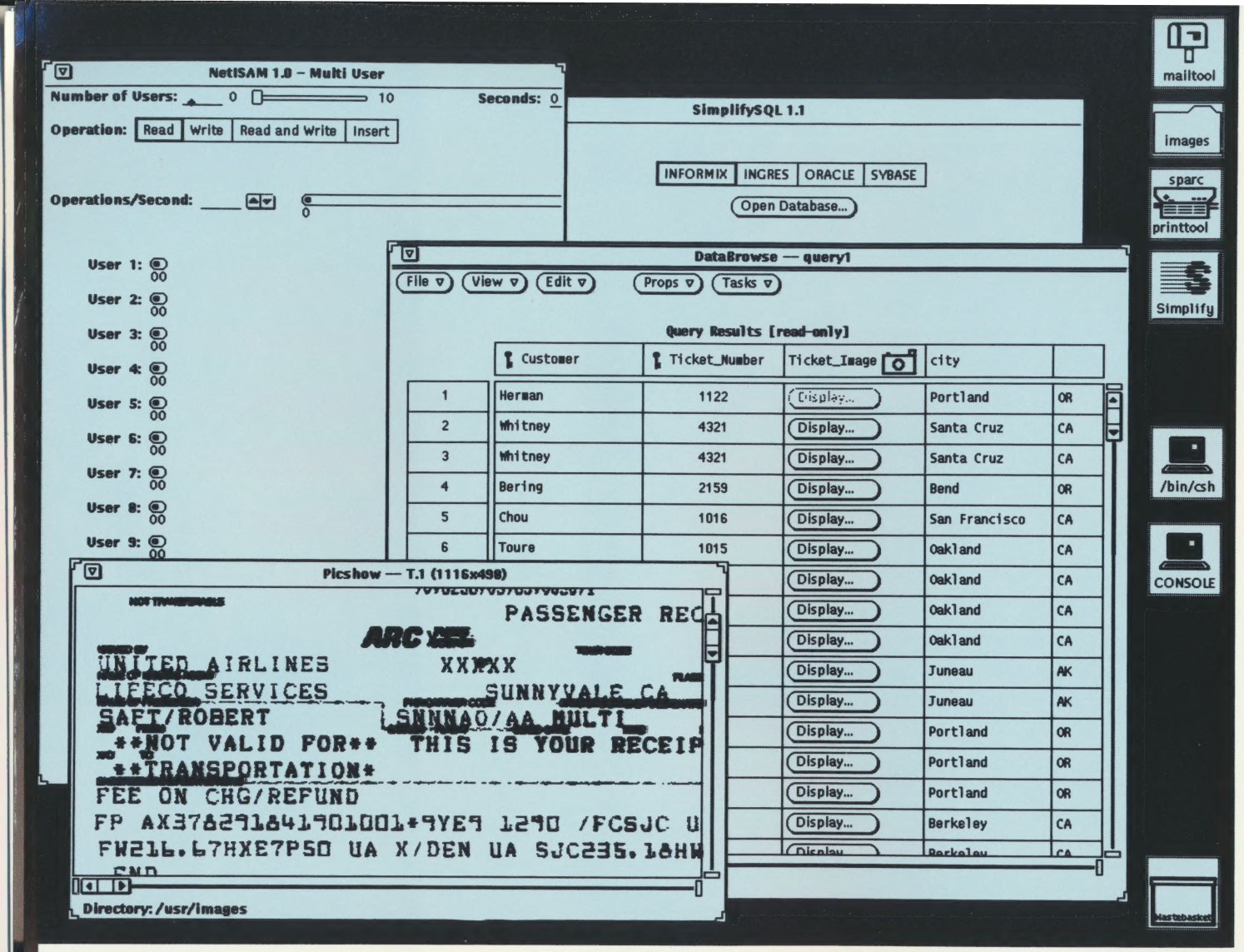


Our SPARCstation systems let you work the way you're used to, doing lots of things at once, in one integrated environment.

For example, the SPARCstation ELC running a revenue accounting system not only streamlines operations, saving hundreds of hours and millions of dollars, but also provides accurate and up-to-date sales and marketing information.

Let's take an airline where ticket transactions are scanned, digitized, and indexed in the system. An operator can easily access the actual ticket image in one window, including fare and tax information. In another window, she can view sales and use records running on a mainframe. All this without ever having to slow down.

And because the SPARCstation is easy to use, operators and other users don't need extensive computer training.

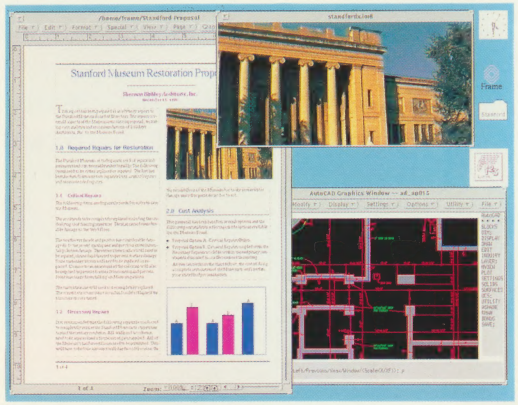
Answer B

The SPARCstation ELC is the perfect client solution for distributed database applications, spreadsheets, word processing, and electronic mail for report writing, technical documentation, software engineering, or financial services.

Every desktop SPARCstation system i
Catalyst CDware,™ letting you conveni
applications—right from your desktop
selling productivity tools, such as Lotu
FrameMaker, Interleaf, and WordPerf
products, desktop publishing and gra
and scientific software, and software
at your own pace.

System Software AnswerBook™ gives you online help, including page-by-page documentation, dynamic tables of contents, a powerful search feature, and hypertext links. Get more than 17,000 pages of information on your SPARCstation—quickly and easily.

What makes multimedia on a SPARCstation unique is our sophisticated networking. For example, VideoPix™ video capture card lets you easily and cost-effectively grab, manipulate, store, and share video images across the network—anywhere in the world.



Really, it's all the little things that make a SPARCstation exceptional.

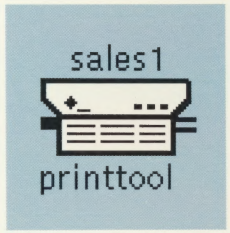
We have hundreds of NFS licensees and PC connectivity through PC-NFS,® so you can keep your PCs, adding them to the network. Preserve your software investments, too. With DOS Windows, a SPARCstation can run all your familiar DOS applications.

Our ONC distributed computing environment and SunNet™ SunLink® connectivity products let you connect your SPARCstation to most computers anywhere—even into networks such as IBM and DEC. And share information, printers, and storage devices.

…des a volume of …y try and buy leading …owse through best- …P-3, Wingz, dBASE IV, …Try integrated office …e solutions, math …lopment tools—

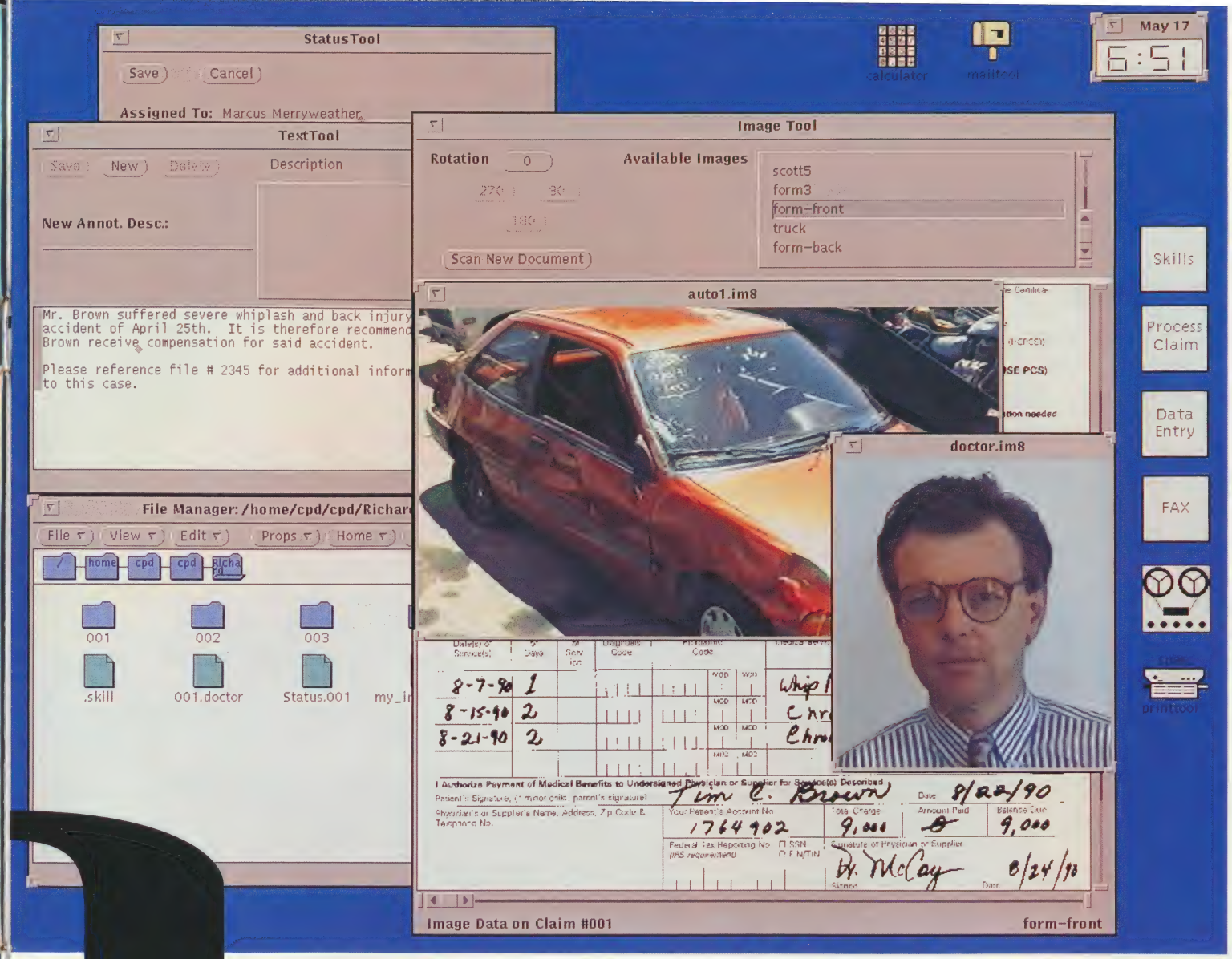
Our SPARCstation systems are complemented by our SPARCserver™ family, which offers a wide choice of performance, memory, disk capacity, and workgroup support, handling hundreds of simultaneous users—without slowing down. Together, our SPARCstation and SPARCserver systems provide you with the most focused, open client-server computing solution in the industry.

The SPARCstation high-resolution monitor gives you more than three times the pixels of VGA color. So you can display three times the information. And all SPARCstation monitors comply with the most stringent environmental and safety regulations—worldwide.



Print Tool lets you print files by simply dragging and dropping File Manager icons over the Print Tool icon.

The SPARCprinter™ and NeWSprint™ software let you print 12 laser-quality pages per minute—twice the performance of a laser printer at half the cost. NeWSprint can be used with a SPARCstation to make any printer PostScript® compatible. You can have access to more than 1000 fonts and printing resources anywhere on the network.



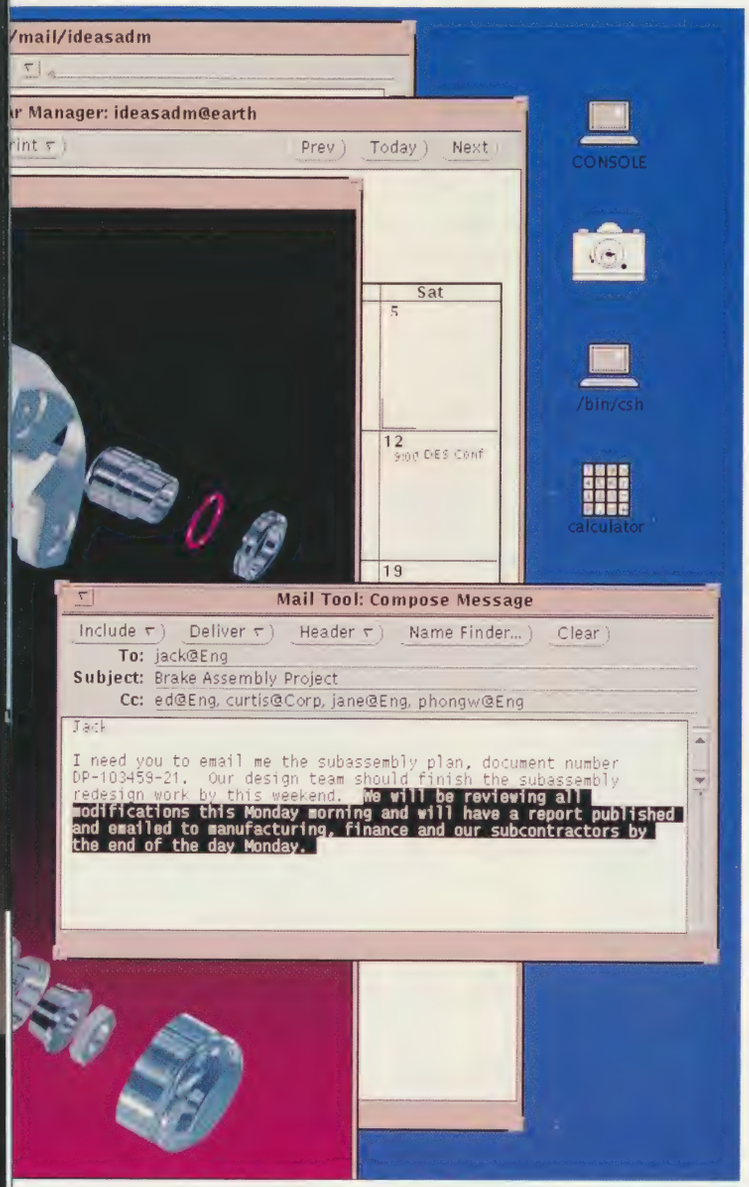
The SPARCstation IPX is the entry-level accelerated color platform of choice for applications such as financial services and database management. These commercial markets can easily take advantage of the SPARCstation IPX's power and versatility, surpassing networked PC solutions. Its affordability makes the SPARCstation IPX popular in other areas, including CASE, MCAD, and EDA.

Let's follow an insurance claim procedure as it's generated in San Francisco, approved in New York, and completed in Dallas.

At the San Francisco office, an insurance agent pulls up windows to get information and check discrepancies on a medical claim. One window displays the claim form, another a photo of the accident. Using SPARCstation multimedia and audio capabilities, she can hear a doctor's recommendation for treatment. The agent jots down comments and forwards the information through electronic mail to the insurance company headquarters in New York.

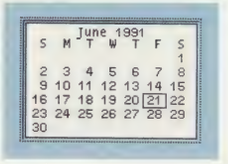
At headquarters, a claims adjuster pulls up the claim in a window for processing. Using SimplifySQL™ database management tool, he can call up any number of databases—including ORACLE,® INGRES,™ and SYBASE®—at the same time. Accessing the San Francisco database, he reviews the claim information. He uses the New York database to find the average cost of treatment by geography. To make a final decision, he compares and compiles the data and drags the cost analysis into a Wingz spreadsheet. After reviewing all the information, he approves the claim and sends the document through electronic mail to the documentation department in Dallas for approval processing.

In Dallas, a documentation assistant using FrameMaker integrates the information into a standard claim report for approval. A response and payment is generated and sent to the client.



For all those who create complex designs and solve the most challenging problems, the SPARCstation 2 rises to the occasion. This system gives your power users what they want: the most usable power, memory, expansion, internal storage, and 2-D or 3-D graphics to bring astounding creations to life.

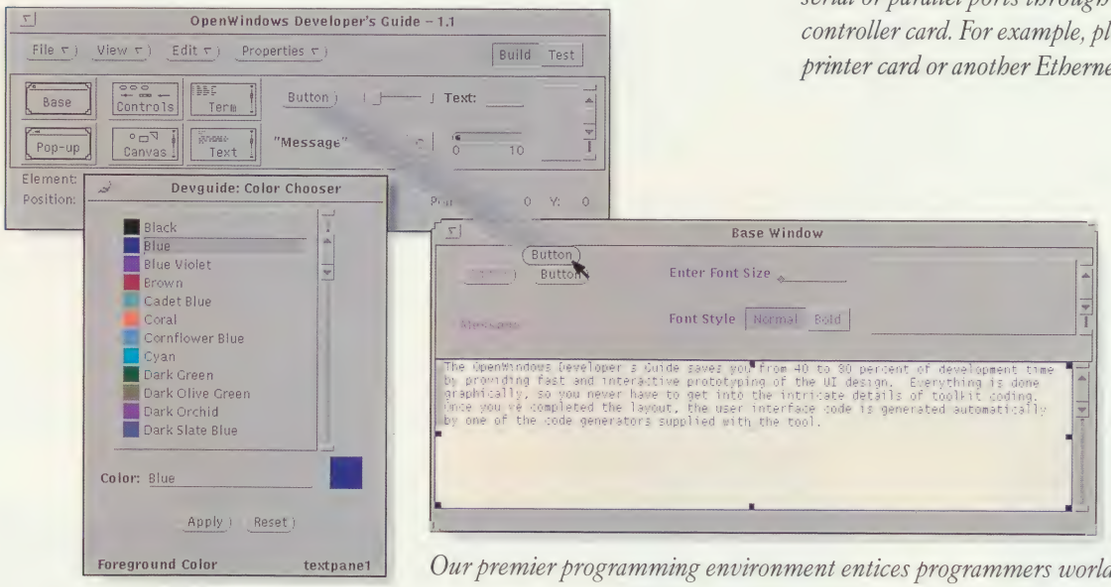
With fast window and graphics acceleration, the SPARCstation 2GX reduces the time it takes to get crucial information, so you can get your products to market faster.



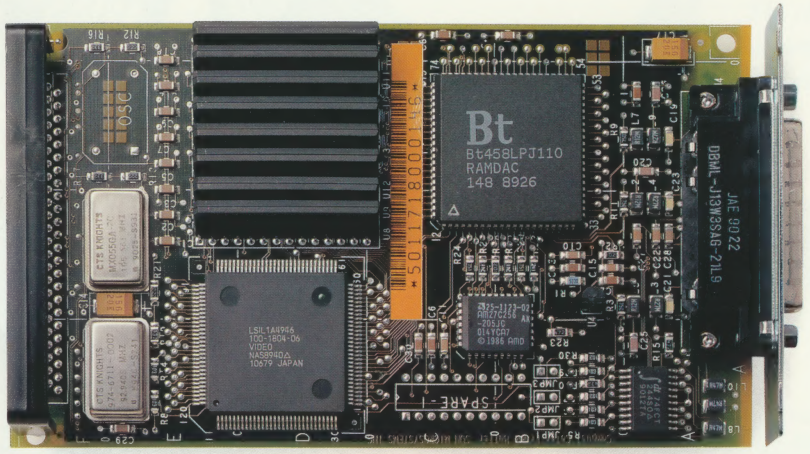
Our OpenWindows DeskSet™ productivity tools let you do daily tasks by simply dragging and dropping icons. So you can send and receive messages, documents, and graphics across the network; move or load files into folders or windows; and view your appointments or other people's calendars to schedule meetings. All without using complex commands.

With SBus technology, you can enhance your SPARCstation—easily and cost-effectively—to do just about anything. From multimedia to custom display applications.

You can connect more devices to a SPARCstation by adding off-the-shelf SCSI serial or parallel ports through Sun's SBus controller card. For example, plug in our printer card or another Ethernet, and a wide



Our premier programming environment entices programmers worldwide to write programs for SPARCstation systems. Our OpenWindows environment, wi the OpenWindows Developer's Guide and the intrinsics toolkit, lets programmer write their applications faster and easier. In popular languages such as C, C++, FORTRAN, Modula-2, COBOL, Pascal, and Ada.



variety of output devices from third-party vendors can be connected to your workstation immediately. Connect plotters and color, ink-jet, laser, dot-matrix, and thermal-transfer printers. As an open specification, SBus attracts third-party developers worldwide. For you, this means hundreds of solutions to choose from—and many more on the way.

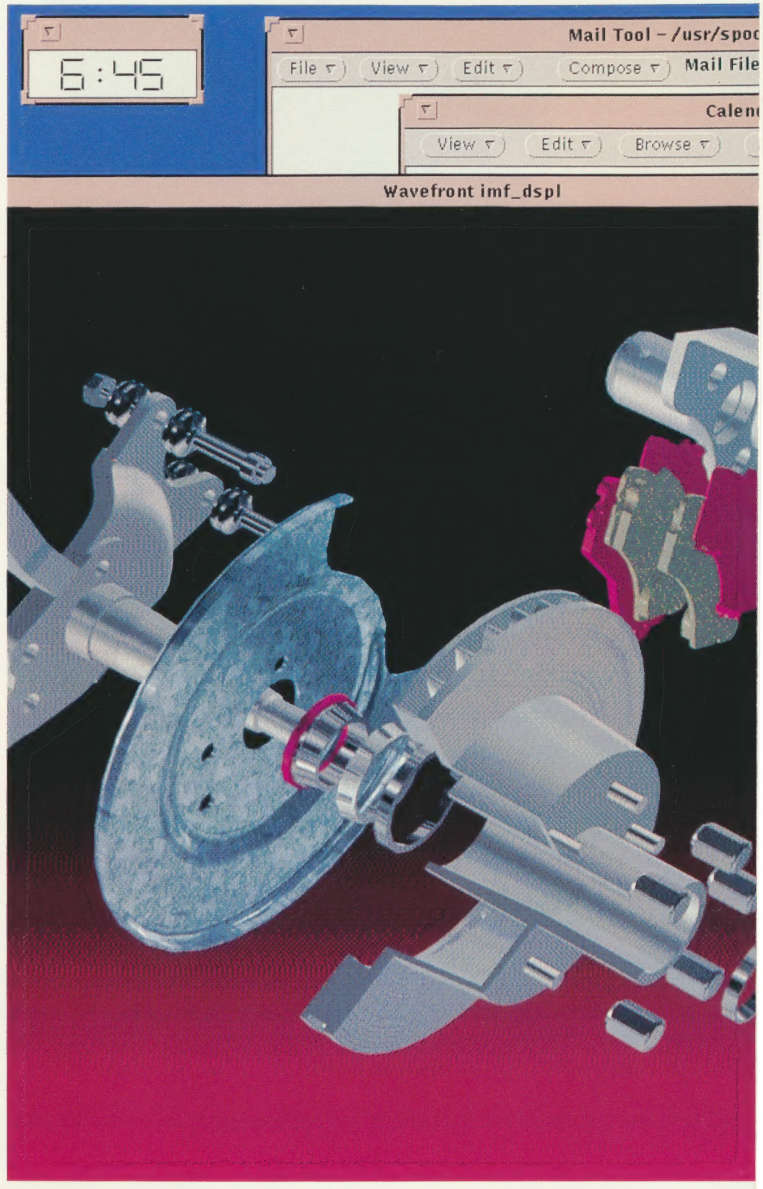
The SPARCstation 2 gives you the most configurability to add more disks, tapes, or CD-ROM.

An engineering team is asked to design a brake shoe subassembly for a new line of sports cars. Because a basic design already exists, the project requires gathering information from various sources and modifying it to meet new specifications.

A SPARCstation lets designers and engineers work concurrently—no matter where they are—saving time and money. For instance, one design team can perform stress analysis on the subassembly, while another team sends new data to manufacturing for tooling modifications.

While working on a component of the subassembly in one window, a designer can check other team members' calendars to set up design review meetings for all teams and keep everyone apprised of the project status.

The final design can be fully rendered with a high-quality rendering application for internal design review, marketing presentations, and technical documentation.

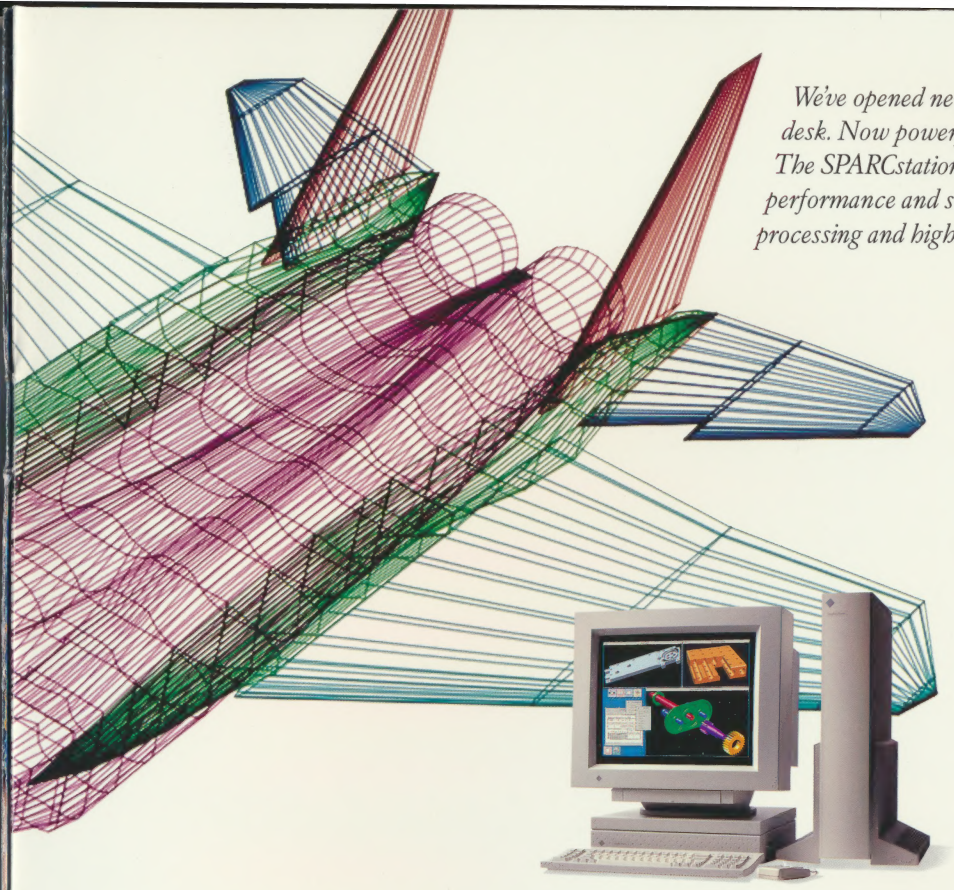


The cost-effective SPARCstation 2GS combines all the power-user features of the SPARCstation 2 with 24-bit 3-D solids performance. Get all the 3-D graphics functionality within one compact "pizza box" enclosure. Create the smoothest, most realistic 3-D models and bring startling clarity to complex wireframe models with graphics features such as Gouraud shading, multiple light sources, and depth cueing. The fast graphics and high compute performance of the SPARCstation 2GS let your draftsmen, designers, and engineers create real-life models in MCAD, molecular modeling, and arts and animation applications.

Our SPARCstation 2GX redefines what power users can expect from a color workstation. With GX graphics acceleration standard, the SPARCstation 2GX gives you fast windows, text, and interactive 2-D and 3-D wireframe graphics. For a price you'd expect to pay for an unaccelerated color workstation. The SPARCstation 2GX gives you the memory, disk capacity, I/O throughput, and expansion you need to handle demanding applications.

And for double buffering and even higher resolution, we also offer the SPARCstation 2GXplus. Both systems are ideal for EDA, MCAD, CASE, electronic publishing, mapping, and finance.

Using SunButtons and SunDials, you can manipulate your high-quality images with precision.



We've opened new frontiers by putting accelerated graphics workstations on every desk. Now powerful interactive graphics are affordable and accessible to everyone. The SPARCstation 2 series includes cost-effective, high-quality 3-D solids graphics performance and sophisticated, accelerated visualization techniques, such as image processing and high-quality 3-D rendering.

The SPARCstation 2GT is our premier 3-D graphics workstation, with even more sophisticated graphics features than the SPARCstation 2GS—at even greater speeds. And it features the industry's best hardware anti-aliasing for superior image quality and DLX™ technology for fast graphics database management and acceleration of overall system performance.

Quality and speed make the SPARCstation 2GT a perfect choice for high-end designers and engineers in MCAD/MCAE, molecular modeling, animation/simulation, GIS, and research—users who demand the fastest and most realistic images possible.

The SPARCstation IPX, our low-priced graphics workstation, combines high-performance computing, built-in GX graphics acceleration on the CPU board, networking, and multitasking—a superior solution to PC CAD. No more adding on boards to reach higher performance—all the PC extras come standard. Fast text, fast windowing, and fast 2-D and 3-D wireframe performance. An integrated solution for the same price as PCs configured for graphics.

The SPARCstation IPX also increases productivity in EDA, MCAD, and electronic publishing applications.

Explore and analyze data and images in ways never before possible. Our SPARCstation VX and MVX deskside graphics workstations feature sophisticated visualization techniques—image processing, volume rendering, 3-D graphics, and high-quality rendering—ideal for scientific research, medical imaging, earth resources, and remote sensing/imaging applications. The single-processing VX system and multi-processing MVX system accelerate our SunVision™ visualization software and XGL™ graphics library.

The SPARCstation VX System: 16-MB, 32-bits/pixel frame buffer, 8-bit GX accelerated frame buffer, and multiple display modes.

The SPARCstation MVX System: Four high-speed processors, each with 4-MB memory, 160-MIPS performance, 320 peak single-precision MFLOPS, and fast data transfer to the VX accelerator.

Sun Microsystems
2550 Garcia Avenue, Mountain View, CA 94043
415 960-1300 Fax 415 969-9131

For U.S. sales office locations, call: 800 821-4643 In California: 800 821-4642
European Headquarters Sun Microsystems Europe, Inc. Bagshot Manor, Green Lane
Bagshot, Surrey GU19 5NL England 0276 51440 Fax 0276 51287
Europe, Middle East, and Africa, call European Headquarters

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Belgium: 32-2-759 5925
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